AMENDMENT

In the Claims:

1. (previously amended) A chuck for a plasma processor, said chuck comprising:

a temperature controlled base;

a thermal insulator disposed on top of said base;

a flat support for holding a workpiece, said flat support disposed on top of said thermal insulator, said flat support receiving an incoming heat flux from a plasma during a process; and

a heater embedded within said flat support,

wherein the heat from said incoming heat flux and said heater is balanced with the cooling from said temperature controlled base such as to control the temperature of said workpiece.

2. (original) The chuck according to claim 1, further comprising a thermal conductor disposed between said flat support and said workpiece.

3. (original) The chuck according to claim 1, wherein said thermal conductor further comprises a helium gas.

4. (original) The chuck according to claim 1 wherein said thermal insulator further comprises a polymer.

5. (original) The chuck according to claim 1 wherein said heater further comprises a plurality of planar heating elements.

6. (original) The chuck according to claim 5 wherein said plurality of planar heating elements forms a plurality of heating zones.

7. (original) The chuck according to claim 5 wherein the power of each of said planar heating elements is controlled independently.

8. (original) The chuck according to claim 7 further comprising a sensor for each of said heating zones, said sensor measuring and sending a signal representative of the temperature for each of said heating zones.

9. (original) The chuck according to claim 8 further comprising a controller for receiving said signal from said sensor and for adjusting the power of each of said planar heating elements based on a set point for each of said heating zones.

10. (original) The chuck according to claim 1 wherein said heater is formed with etched foil technology.

11. (original) The chuck according to claim 1 wherein said flat support further comprises a high temperature non-electrically conductive material.

33. (previously amended) A method for controlling the temperature across a workpiece profile having multiple zones, said method comprising:

providing a base maintained at a constant temperature, said constant temperature being below the temperature of the workpiece, said base having a thermal insulator mounted on top of said base;

holding the workpiece against a top face of a workpiece holder, said workpiece holder mounted on top of said thermal insulator;

applying a heat flux from a plasma during a process to the workpiece; and

heating each zone of the workpiece independently with a heater disposed within said workpiece holder.

34. (original) The method according to claim 33 further comprising monitoring the temperature of the multiple zones with a sensor in each zone.

35. (original) The method according to claim 34 further comprising adjusting the temperature of each zone based on said monitoring.

36. (previously amended) An apparatus for controlling the temperature across a workpiece profile having multiple zones, said apparatus comprising:

means for maintaining a base at a constant temperature, said constant temperature being below the temperature of the workpiece, said base having a thermal insulator mounted on top of said base;

means for holding the workpiece against a top face of a workpiece holder, said workpiece holder mounted on topof said thermal insulator;

means for applying a heat flux from a plasma during a process to the workpiece; and

means for independently heating each zone of the workpiece with a heater disposed within said workpiece holder.

37. (original) The apparatus according to claim 36 further comprising means for monitoring the temperature of the multiple zones with a sensor in each zone.

38. (original) The apparatus according to claim 37 further comprising means for adjusting the temperature of each zone based on said monitoring.